WHAT IS CLAIMED IS:

1. A method of making a biosensor, the method comprising the steps of:

providing an electrically conductive material on a base; and

forming electrode patterns on the base using broad field laser ablation, wherein at least two electrode patterns have different feature sizes.

2. The method of claim 1 wherein the conductive material is selected from the group consisting of gold, platinum, palladium, iridium, and indium tin oxide.

3. The method of claim 1 wherein the base is a polymer.

4. The method of claim 1 wherein the forming step includes removing at least 2% of the conductive material from the base.

5. The method of claim 4 wherein at least 50% of the conductive material is removed from the base.

6. The method of claim 4 wherein at least 90% of the conductive material is removed from the base.

7. The method of claim 1 wherein the laser ablation is performed by a laser apparatus and at least one electrode pattern is formed with pulses of a laser beam from the laser apparatus.

8. The method of claim 1 wherein at least one electrode pattern is an interlacing pattern.

9. The method of claim 1 wherein at least one electrode pattern has at least one edge extending between two points, a standard deviation of the edge from a line extending between two points is less than about 6μm.

10. The method of claim 9 wherein the standard deviation is less than about 2μm.

11. The method of claim 9 wherein the standard deviation is less than about 1.0μm.

12. The method of claim 1 wherein the at least one electrode pattern has electrode fingers that cooperate with one another to define an electrode gap having a pre-determined width value, a standard deviation of the gap from the width value is less than about 4μm.

13. The method of claim 12 wherein the gap standard deviation is less than about 3 μm.

14. The method of claim 12 wherein the gap standard deviation is less than about 1.0 μm.

15. The method of claim 1 further comprising the step of placing a reagent on at least one of the electrode patterns.

16. The method of claim 1 wherein the laser ablation is performed by a laser apparatus and at least one electrode pattern is formed with a single pulse of a laser beam from the laser apparatus.

17. The method of claim 1 wherein the laser ablation is performed by a laser apparatus that produces a laser beam having a dimension that is greater than a feature size of at least one electrode pattern.

18. The method of claim 1 wherein at least one electrode pattern is formed in less than about 0.25 seconds.

19. The method of claim 1 wherein at least one electrode pattern is formed in less than about 50 nanoseconds.

20. The method of claim 1 wherein at least one electrode pattern is formed in about 25 nanoseconds.

21. A method of making a biosensor electrode set, comprising:

providing a laser system having a lens and a mask, and

ablating through a portion of a metallic layer with a laser, to form an electrode pattern, the pattern of ablation being controlled by the lens and the mask;

wherein said first metallic layer is on an insulating substrate.

22. The method of claim 21 wherein said metallic layer comprises copper.

23. The method of claim 21 wherein said metallic layer comprises at least one member selected from the group consisting of gold, platinum, palladium and iridium.

24. The method of claim 21 wherein said insulating substrate is a polymer.

25. The method of claim 21 wherein said pattern has a feature size of less than 100 μm.

26. The method of claim 21 wherein said pattern has a feature size of less than 75 μm.

27. The method of claim 21 wherein said pattern has a feature size of 1 μm to 50 μm.

28. The method of claim 21 wherein the pattern is formed as a microelectrode array.

29. The method of claim 21 wherein said metallic layer is in contact with said insulating substrate.

30. The method of claim 29 wherein said metallic layer comprises at least one member selected from the group consisting of gold, platinum, palladium and iridium.

31. The method of claim 21 further comprising the step of applying a second metallic layer on said metallic layer.

32. The method of claim 21 wherein said electrode pattern is formed in less than about 0.25 seconds.

33. The method of claim 21 wherein said electrode pattern is formed in less than about 50 nanoseconds.

34. The method of claim 21 wherein said electrode pattern is formed in about 25 nanoseconds.

35. A method of making an electrode set ribbon, comprising:

providing a laser system having a lens and a mask, and

ablating through a portion of a metallic layer with a laser, to form a plurality of electrode patterns, the pattern of ablation being controlled by the lens and the mask,

wherein the metallic layer is on an insulating substrate, and

said electrode set ribbon comprises a plurality of electrode sets.

36. The method of Claim 35 wherein said metallic layer comprises at least one member selected from the group consisting of gold, platinum, palladium and iridium and said metallic layer is in contact with said insulating substrate.

37. The method of claim 35 wherein said electrode pattern is formed in less than about 50 nanoseconds.

38. The method of claim 35 wherein said electrode pattern is formed in about 25 nanoseconds.

39. The method of claim 35 wherein at least one pattern has a feature size of less than 100 μm.

40. The method of claim 35 wherein at least one pattern has a feature size of 1 μm to 50 μm.

41. A method of making a sensor strip, comprising:

providing a laser system having a lens and a mask,

forming an electrode set by ablating through a portion of a first metallic layer with a laser, a pattern of ablation being controlled by the lens and the mask;

wherein said first metallic layer is on an insulating substrate, and

cutting said substrate, to form a strip.

42. The method of Claim 41 further comprising the step of applying a dielectric on a portion of said metallic layer.

43. The method of Claim 41 further comprising the step of applying a reagent on a portion of said electrode set.

44. The method of Claim 41 wherein said metallic layer comprises at least one member selected from the group consisting of gold, platinum, palladium and iridium.

45. The method of claim 41 wherein the electrode set is formed in less than about 50 nanoseconds.

46. The method of claim 41 wherein the electrode set is formed in about 25 nanoseconds.

47. The method of claim 41 wherein at least one pattern has a feature size of less than 100 μm.

48. The method of claim 41 wherein at least one pattern has a feature size of 1 μm to 50 μm.

49. A method of making a biosensor, the method comprising the steps of:

providing an electrically conductive material on a base; and

partially removing the conductive material using laser ablation from the base so that less than 90% of the conductive material remains on the base and at least one

electrode pattern is formed from the conductive material, the at least one electrode pattern having an edge extending between two points, a standard deviation of the edge from a line extending between two points being less than about 6 μm along the length of the edge.

50. The method of claim 49 wherein the standard deviation is less than about 2μm.

51. The method of claim 49 wherein the standard deviation is less than about 1μm.

52. The method of claim 49 wherein at least one electrode pattern is formed in less than about 0.25 seconds.

53. The method of claim 49 wherein at least one electrode pattern is formed in less than about 50 nanoseconds.

54. The method of claim 49 wherein said electrode pattern is formed in about 25 nanoseconds.

55. The method of claim 49 wherein the at least one electrode pattern has electrode fingers that cooperate with one another to define an electrode gap having a pre-determined width value, a standard deviation of the gap from the width value is less than about 4μm.

56. The method of claim 55 wherein the gap standard deviation is less than about 3 μm.

57. The method of claim 55 wherein the gap standard deviation is less than about 1.0 μm.

58. The method of claim 49 wherein less than 50% of the conductive material remains on the base.

59. The method of claim 49 wherein less than 10% of the conductive material remains on the base.

60. The method of claim 49 wherein the conductive material is removed using laser ablation.

61. A method of making a biosensor, the method comprising the steps of:

providing an electrically conductive material on a base,

forming electrode patterns on the base using broad field laser ablation, wherein at least two electrode patterns have different feature sizes, and

extending a cover over the base, the cover and base cooperating to define a sample-receiving chamber and at least a portion of the electrode patterns are positioned in the sample-receiving chamber.

62. The method of claim 61 wherein the conductive material is selected from the group consisting of gold, platinum, palladium, iridium, and indium tin oxide.

63. The method of claim 61 wherein the base is a polymer.

64. The method of claim 61 wherein the forming step includes removing at least 2% of the conductive material from the base.

65. The method of claim 64 wherein at least 90% of the conductive material is removed from the base.

66. The method of claim 61 wherein the laser ablation is performed by a laser apparatus and at least one electrode pattern is formed with pulses of a laser beam from the laser apparatus.

67. The method of claim 61 wherein at least one electrode pattern is an interlacing pattern.

68. The method of claim 61 wherein at least one electrode pattern has at least one edge extending between two points and a standard deviation of the edge from a line extending between two points is less than about 2μm.

69. The method of claim 68 wherein the standard deviation is less than about 1.5μm.

70. The method of claim 61 wherein the at least one electrode pattern has electrode fingers that cooperate with one another to define an electrode gap having a pre-determined width value, a standard deviation of the gap from the width value is less than about 2μm.

71. The method of claim 70 wherein the standard deviation is less than about 1.75 μm.

72. The method of claim 61 further comprising the step of placing a reagent on at least one of the electrode patterns.

73. The method of claim 61 wherein the laser ablation is performed by a laser apparatus that produces a laser beam having a dimension that is greater than a feature size of at least one electrode pattern.

74. The method of claim 61 wherein at least one electrode pattern is formed in less than about 50 nanoseconds.

75. The method of claim 61 wherein said electrode pattern is formed in about 25 nanoseconds.

76. A method of making a biosensor electrode set, comprising:

providing a laser system having a lens and a mask, and

ablating through a portion of a first metallic layer with a laser, to form an electrode pattern, the pattern of ablation being controlled by the lens and the mask,

wherein said metallic layer is on an insulating base.

77. The method of claim 76 wherein the electrode pattern is formed in less than about 50 nanoseconds.

78. The method of claim 76 wherein said electrode pattern is formed in about 25 nanoseconds.

79. The method of claim 78 wherein the metallic layer is gold.

80. The method of claim 78, wherein said insulating base is a polymer.

81. The method of claim 78, wherein said pattern has a feature size of less than 100 μm.

82 The method of claim 78, wherein said pattern has a feature size of less than 75 μm.

83. The method of claim 78, wherein said pattern has a feature size of less than 20 μm.

84. A method of making a biosensor strip, comprising:

providing a laser system having at least a laser source and a mask, and

forming an electrode set by ablating through a portion of a metallic layer with a laser, a pattern of ablation being controlled by the mask,

wherein said metallic layer is on an insulating base.

85. The method of claim 84 further comprising the step of applying a reagent on a portion of said electrode set.

86. The method of claim 84 wherein the electrode set is formed in less than about 200 nanoseconds.

87. The method of claim 84 wherein the electrode set is formed in less than about 50 nanoseconds.

88. The method of claim 84 wherein the electrode set is formed in about 25 nanoseconds.

89. The method of claim 84 wherein the electrode set is formed by a single pulse of laser light from the laser.

90. The method of claim 84 wherein the electrode set is formed by pulses of laser light from the laser.

91. A method of making a biosensor, the method comprising the steps of:

providing an electrically conductive material on a base, and

forming a pre-determined electrode pattern on the base using laser ablation through a mask, the mask having a mask field with at least one opaque region and at least one window formed to allow a laser beam to pass through the mask and to impact predetermined areas of the electrically conductive material.

92. The method of claim 91 wherein the windows are configured in a window pattern identical in geometry to the predetermined electrode pattern.

93. The method of claim 91 wherein the electrode set is formed in less than about 200 nanoseconds.

94. The method of claim 91 wherein the electrode set is formed in less than about 50 nanoseconds.

95. The method of claim 91 wherein the electrode set is formed in about 25 nanoseconds.

96. The method of claim 91 wherein the electrode pattern is formed by a single pulse of laser light from the laser.

97. The method of claim 91 wherein the electrode pattern is formed by pulses of laser light from the laser.

98. The method of claim 91 wherein the forming step includes removing at least 2% of the conductive material from the base.

99. The method of claim 98 wherein at least 5% of the conductive material is removed from the base.

100. The method of claim 98 wherein at least 90% of the conductive material is removed from the base.